

**GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA**

STARRED QUESTION NO:87

ANSWERED ON:02.03.2016

Weather Forecast

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Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether as per a study the improved meteorological advisory services has enabled the country to post higher farm output/income of farmers and if so, the details thereof;
- (b) whether 75% of farmers still lack reliable access to improved meteorological advisory and if so, the reasons therefor;
- (c) whether there is any proposal to start weather forecasting at the block-level and if so, the details thereof;
- (d) whether the Indian Meteorological Department (IMD) has set up a committee to change several terms used by the forecaster such as drought to replace with deficient year and large deficient year; and
- (e) if so, the details thereof and the number of States that have been partially or completely declared drought-affected?

Answer

THE MINISTER FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(DR. HARSH VARDHAN)

(a) to (e): A Statement is laid on the Table of the House.

STATEMENT LAID ON THE TABLE OF THE LOK SABHA IN REPLY (a) to (e) TO STARRED QUESTION NO. *87 REGARDING "WEATHER FORECAST" TO BE ANSWERED ON WEDNESDAY, MARCH 02, 2016

(a) Yes Madam. The Government has been entrusting the task of carrying out a comprehensive third party assessment of socio-economic benefits of its services to the reputed National Council of Applied Economic Research (NCAER), Delhi. As per the recent NCAER report, farming community of the country is using the Gramin Krishi Mausam Sewa (GKMS) service products of Earth System Science Organization-India Meteorological Department (ESSO-IMD) for critical farm operations Viz. i) Management of sowing (Delayed onset of rains); ii) Changing crop variety (Delay in rainfall); iii) Spraying Pesticides for disease control (occurrence of rainfall); iv) Managing Irrigation (Heavy rainfall Forecast).

NCAER carried out assessment of economic benefit to farmers of GKMS service in 2010 and 2015. During 2010; 2.0 million farmers were subscribed to SMS service, however during 2015; 11.50 million farmers were subscribed to SMS service.

According to a survey, the agriculture specific forecasts of Earth System Science Organization-India Meteorological Department (ESSO-IMD) have been found reliable by more than 93 percent of Indian farmers. 95% of the farmers say that forecasts of ESSO-IMD have improved during last 2-4 years. Further:

â€¢ Most of farmers felt that there had been an improvement in the timeliness of the weather forecasts.

â€¢ Among various components of weather elements, rainfall component has the highest priority.

Concurrently, with the implementation of District Level Agro-Meteorological Advisory services, India has seen improved agriculture performance in the rain fed farming (Covers 60% of arable land).

Incremental profit due to GKMS is assessed at 25% of the net income. Potential Annual Economic profit by using GKMS by 24% of the community cultivating 4-principle crops (wheat; paddy; sugarcane; cotton) in 2010 was assessed at Rs. 38,463 Crores (when 2.0 million farmers were subscribed to SMS service), the annual profit rose to Rs.42,000 Crores in 2015 (11.5 million farmers have been subscribed to SMS service), Top11- Principal Crops was assessed as 56,310 Crores and top 28- Principal Crops was assessed as Rs. 67,000 Crores in 2015.

The study suggests that GKMS has the potential of generating net economic benefit up to Rs.3.3 lakh crores on the 4-principal crops alone when Agro-Meteorological advisory is fully utilized by 90.3 million dependent households.

(b) No Madam. ESSO-IMD in association with AMFUs is disseminating agro-meteorological advisories to the farmers through different multi-channel system like All India Radio (AIR) and Doordarshan, Private TV and radio channels, On all India basis, television

and visual media communication found to be serving as the major source of weather based crop advisory information. Newspaper and Internet, SMS and IVRS under Public Private Partnership mode by IMD, Reuter Market Light, Handygo, NOKIA-HCL, Mahindra Samriddhi, Reliance Foundation and IFFCO Kisan Sanchar Limited (IKSL) are disseminating agro-meteorological advisories to the farming communities via SMS and IVR system. In addition, agro-meteorological advisories are also disseminated through Kisan Portal (<http://farmer.gov.in>) launched by the Ministry of Agriculture.

ESSO-IMD is taking continuous efforts to expand popularization of the service among the farming community. Farmers' Awareness Programmes are being conducted in various parts of the country. Besides these, details of more number of farmers are collected through Kisan Portal launched by the Ministry of Agriculture. ESSO-IMD along with the experts from Agromet Field Units (AMFUs) located at State Agricultural Universities, institutes of Indian Council of Agriculture Research (ICAR) and Indian Institute of Technology (IIT) participate in Kisan Melas, Farmers' Day etc to create awareness about the service so that more farmers get benefitted. Because of these continuous efforts, number of farmers getting the benefit is increasing significantly.

Future strategies are:

- Expansion of Agro-Meteorological Advisory service units to cover all farmers.
- Roping in all available agencies including NGOs at sub-district level by organizing Awareness and training programs at Krishi Vigyan Kendra.
- Increase spatial and temporal resolutions of weather forecasts
- Now-casting (up to 3 hours) and Extended Range Forecasts (15-20days)

(c) Research efforts are initiated by ESSO -IMD to explore possibility of generating sub district scale (block level) Agro-meteorological forecast with acceptable level of verification skill in a pilot mode.

(d)-(e) Yes Madam. A committee was set up to review the present terms and terminologies being used in operational weather forecasts and to recommend changes for implementation based on interpretation of latest data.

The modified terminologies have been implemented from 1st January 2016. The decision by the committee to discontinue with the usage of the term 'All India Drought Year' to be replaced by 'All India Deficient Rainfall Year' was mainly owing to the observational fact that the drought situation never manifests over the country as a whole.

Monitoring of the seasonal (monthly / weekly rainfall scenario with reference to respective normal (mean value) is only carried out by ESSO-IMD to regularly assess and identify zones of deficit rainfall leading to drought conditions, the declaration of which remains with the mandate of Ministry of Agriculture in consultation with various state governments. Because of this the term 'All India Drought Year' is replaced by 'All India Deficient Rainfall Year'.

During 2015, the Ministry of Agriculture & Farmers Welfare, Department of Agriculture, Cooperation and Farmer Welfare (Drought Management Division) in consultation with state government had declared 10 States partially or completely drought-affected. (Andhra Pradesh; Karnataka; Madhya Pradesh; Maharashtra; Odisha; Telengana; Uttar Pradesh; Jharkhand; Rajasthan; Chhattisgarh).